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Monthly Report

PAR 233

29 Oct 65

SUBJECT: Zoom (6X to 60X) Projection Lens for Monochromatic Light

TASK/PROBLEM

1. Investigate the possibility of designing a 6X to 60X Zoom Projection Lens for Monochromatic Light.

DISCUSSION

2. The contractor's lens design group has made a study of the objective system using methods of first order gaussian optics. From this study, they now plan to attempt ray-trace designs of a three-part arrangement. The three parts, in the order of their position from the film gate to the viewing screen, are:

a. Ten-inch, f/2.8 collimator

b. Two-inch to 20-inch Zoom lens producing an aerial image of 1 inch diameter of a film gate area ranging from 5 inches to 0.5 inch diameter.

c. 30X projector lens to image the 1 inch diameter aerial image upon the 30-inch diameter screen.

PLANNED ACTIVITY

3. The next effort will be an attempt to design the 2 inch to 20 inch Zoom lens (item 2b. above) by the automatic computer program (ray trace).

Declass Review by NGA.